

ABSTRACT

An object of the present invention is to provide a cooler for cooling both sides (top and bottom surfaces) of a semiconductor device, wherein the variation of pressing force on flat cooling tubes holding a semiconductor device is reduced, thereby uniformly dissipating the heat generated by the semiconductor device. When the holding plates press the flat cooling tubes and semiconductor modules by tightening the nut, the dimensional tolerances in the stacking direction are absorbed by the deformable portions in the inlet and outlet headers. A spacer may be employed inside the flat cooling tubes in order to suppress the deformation of the flat cooling tubes along the stacking direction.